

ABSTRACT

A method and apparatus for measuring and calibrating the measurement of small volumes of liquids. The small volumes of liquid are typically dispensed from liquid delivery devices, the delivery device often having multiple channels to analyze many samples at once. The liquid samples are delivered to one or more cells, typically in a multi-well plate, and positioned in a spectrophotometer for determining an absorbance of a chromophore in the liquid sample. Based upon an absorbance measurement and the concentration of the chromophore, a path length of the liquid sample is determined, from which a volume of the sample may be calculated. The method and apparatus provide various means for correcting for differences in the dimensions and/or other factors causing a non-linear deviation from the Beer-Lambert law. A system or kit may be provided including sets of sample solutions of varying dilution ranges for calibrating different liquid volumes. The kit may further include software code for storing and analyzing the various sample solutions.